

**U.S. Department of the Interior
Bureau of Land Management
Kremmling Field Office
P.O. Box 68
Kremmling, CO 80459**

CATEGORICAL EXCLUSION

NUMBER: DOI-BLM-LLCON02000-2012-0022-CX

PROJECT NAME: Culver 3D Seismic Survey

LEGAL DESCRIPTION: North Park, Jackson County, Colorado
6th P.M.

T. 9 N., R. 79 W., Sec. 34, 35, 36;

T. 9 N., R. 78 W., Sec. 31, 32, 33;

T. 8 N., R. 79 W., Sec. 1, 2, 3, 10, 11, 12, 13, 14, 15, 22, 23, 24, 25, 26, 27;

T. 8 N., R. 78 W., Sec. 4, 5, 6, 7, 8, 9, 16, 17, 18, 19, 20, 21, 28, 29, 30

CASE FILE #: COC-75339

APPLICANT: Geokinetics USA, Inc.

DESCRIPTION OF PROPOSED ACTION: Geokinetics USA, Inc. (Geokinetics) is proposing to conduct a 27.23 square mile (17,427 acres) 3D seismic survey project in Jackson County, Colorado during the month of February 2012. The project area would include federal lands administered by the BLM (4,747 acres), State land (1,207 acres), and private land (11,474 acres). The proposed survey would require the deployment of motion sensing devices (receivers), which would be deployed at regular intervals (110 feet), with spacing between receiver lines of 1,320 feet. An energy source (vibroseis) would be used in a diagonal pattern to the receiver lines at regular "source point" intervals (spaced approximately 110 feet apart and 1,320 feet along each receiver line).

During the survey and cable layout phase, field crews would GPS and flag receiver lines and source points by hand. Vibroseis operations would follow, and would consist of two independent teams of three "buggy vibes" (vibrator trucks) that would work in tandem on adjacent blocks of source points. The buggy vibes would follow GPS and flagged travel routes to each of the feasibly accessible and administratively allowable pre-determined source points. Once at a source point, each buggy vibe would be lifted up onto a vibrator pad, mounted to the buggy and would emit energy into the subsurface simultaneously through vibration.

The purpose of the survey would be to provide a high-resolution image of the subsurface geological features that would allow Geokinetics (and/or their clients) to effectively evaluate the hydrocarbon reserves underlying the project area, thus reducing the potential for non-productive wells and associated construction of new roads, well pads, pipelines, etc. Vehicular travel for survey operations on BLM administered lands would only be allowed to proceed cross country (off maintained County Roads) during frozen ground conditions and where a minimum of six inches of snow covers the ground, in order to minimize any potential resource impacts.

Survey completion would require approximately four days to layout the receiver lines and fourteen days to vibroseis the project area, record data, and gather and pick up any and all remaining receiver lines, flagging, trash, cables, equipment, etc. Field crews would layout and gather the equipment as the project moves forward across the landscape. To speed up operations and minimize potential cross country travel, a helicopter would be used to transport and deposit caches of receiver equipment (bags of cables, data collectors, batteries, and geophones) to and from the field along the receiver lines at intervals of approximately 1,320 feet. Survey operations would be completed prior to spring thaw or March 1, 2012 whichever comes first.

PLAN CONFORMANCE REVIEW: The Proposed Action is subject to and has been reviewed for conformance with the following plan:

Name of Plan: Kremmling Resource Management Plan (RMP), Record of Decision (ROD)

Date Approved: December 19, 1984; Updated February 1999

Decision Number/Page: II, B.1, Page 5

Decision Language: Objective is “to maximize the availability of the federal mineral estate for mineral exploration and development.”

CATEGORICAL EXCLUSION REVIEW: The Proposed Action qualifies as a categorical exclusion under 516 DM 11, Appendix 1.5, Number: (B) (6) “*Approval of Notices of Intent to conduct geophysical exploration of oil, gas, or geothermal, pursuant to 43 CFR 3150 or 3250, when no temporary or new road construction is proposed.*”

None of the following extraordinary circumstances in 516 DM 2, Appendix 2, apply.

| Extraordinary Circumstances | Yes | No |
|--|-----|----|
| 2.1 Have significant impacts on public health or safety | | X |
| 2.2 Have significant impacts on such natural resources and unique geographic characteristics as historic or cultural resources; park, recreation or refuge lands; wilderness areas; wild or scenic rivers; national natural landmarks; sole or principal drinking water aquifers; prime farmlands; wetlands (Executive Order 11990); floodplains (Executive Order 11988); national monuments; migratory birds; and other ecologically significant or critical areas. | | X |
| 2.3 Have highly controversial environmental effects or involve unresolved conflicts concerning alternative uses of available resources [NEPA section 102(2)(E)]. | | X |
| 2.4 Have highly uncertain and potentially significant environmental effects or involve unique or unknown environmental risks. | | X |
| 2.5 Establish a precedent for future action or represent a decision in principle about future actions with potentially significant environmental effects. | | X |
| 2.6 Have a direct relationship to other actions with individually insignificant but cumulatively significant environmental effects. | | X |
| 2.7 Have significant impacts on properties listed, or eligible for | | X |

| | | |
|--|--|---|
| listing, on the National Register of historic Places as determined by either the bureau or office. | | |
| 2.8 Have significant impacts on species listed, or proposed to be listed, on the List of Endangered or Threatened Species, or have significant impacts on designated Critical Habitat for these species. | | X |
| 2.9 Violate a Federal Law, or a State, local, or tribal law or requirement imposed for the protection of the environment. | | X |
| 2.10 Have a disproportionately high and adverse effect on low income or minority populations (Executive Order 12898). | | X |
| 2.11 Limit access to and ceremonial use of Indian sacred sites on Federal lands by Indian religious practitioners or significantly adversely affect the physical integrity of such sacred sites (Executive Order 13007). | | X |
| 2.12 Contribute to the introduction, continued existence, or spread of noxious weeds or non-native invasive species known to occur in the area or actions that may promote the introduction, growth, or expansion of the range of such species (Federal Noxious Weed Control Act and Executive Order 13112). | | X |

INTERDISCIPLINARY REVIEW:

| Name | Title | Area of Responsibility | Date Review Completed |
|---------------|-----------------------------|----------------------------------|-----------------------|
| Kelly Elliott | Natural Resource Specialist | Minerals | 2/10/12 |
| Megan McGuire | Wildlife Biologist | T&E | 2/9/12 |
| Paula Belcher | Hydrologist | Soil, Water, Air | 2/2/2012 |
| Bill Wyatt | Archaeologist | Cultural and Tribal Consultation | 2/8/2012 |

REMARKS:

Cultural Resources: A letter to the Colorado State Historic Preservation Officer (SHPO) dated December 23, 2011, was sent to identify the compliance process and a “no adverse effect” determination to historic properties. The SHPO responded with a concurrence of a “no adverse effect” on January 10, 2012, with additional questions on compliance. The BLM also filed the Class I inventory report #CR-12-04 on January 11, 2012, along with clarification of actions. The SHPO responded on January 25, 2012, and concurred with the following procedure:

1. Vibroseis actions would only take place on BLM-administered and state lands as long as there is minimum of 6” of snow on frozen ground. If the terrain does not meet the conditions of 6” of snow cover over frozen ground, then all Vibroseis actions would be restricted to maintained and graded county roads. If conditions are not met there would be no vehicular cross country travel on BLM-administered land or state land to lay out receiver lines or to extract those lines.
2. A predictive model has been created to identify areas of high potential for cultural resource sites. The model would be used on federal and private lands. The predictive model would extend beyond federal and state land onto private lands 1/8 mile. Only

Vibroseis would be allowed within areas of high site potential. Known sites within areas of high potential would be avoided by the stated avoidance measures.

3. The consulting archaeologist would identify all vibroseis points that have a potential to impact known cultural resources that are unevaluated (need data) or eligible for avoidance. Vibroseis actions would be relocated 500 feet away from sites with standing historic structures or aboriginal stone features, and 200 feet from a site if there are no standing historic structures or aboriginal stone features. The cultural resource consultant would also monitor all avoided sites where standing structures or stone features are present during vibroseis actions.
4. The consulting archaeologist would provide a monitoring report after the work of the proposed action is completed.

The stipulations for project compliance are identified in the Conditions of Approval (CULTURAL) below.

Native American Religious Concerns: Tribal consultation was initiated to the appropriate tribes on December 23, 2011, and to date no response has been received.

Threatened and Endangered Species: No impacts to state or federally listed threatened or endangered species are expected to occur as a result of the proposed project.

Greater sage-grouse, a BLM-designated sensitive species, uses the project area in spring through the fall months for breeding and raising young. In order to protect sage-grouse during critical periods of their life requirements (nesting and brood rearing), no operations would be allowed on BLM-managed lands from March 1st (or when breeding sites start to become occupied—usually as snow melts off the sites) to June 30th. Although most of the breeding sites (leks) are located outside of the project boundary, once the females breed, they will leave the lek and nest up to 4 miles away on land within the project area.

A large part of the project area is identified as critical winter range for sage-grouse (approx. 4,100 acres). Potential impacts would likely be stress from displacing birds from the area to adjacent winter habitat during project activities. In order to protect sage-grouse in critical winter range, motorized vehicles would only be permitted on winter maintained roads within T. 9N., R. 78W., Sec 4-6; T. 8N., R. 79W., Sec 13, 22-27; and T. 8N., R. 78W., Sec 18, 19, 20, 29 and 30. These roads include: CO Highway 14, JCR 12E, JCR 23A, JCR 31, JCR 21, and JCR 25.

Since the winter of 2011-2012 has been relatively mild, impacts to sage-grouse would be less since more forage and cover is available above the snow. It would be more beneficial to the sage-grouse to disturb the birds in a mild year, one-time, than to disturb the birds multiple times, if data from the project was not complete. In addition, collecting the most complete data possible from the project may reduce exploratory wells in the area, further reducing cumulative impacts to sage-grouse. Therefore, the proponent may request an exception to the sage-grouse winter range stipulation (to allow motorized vehicles off winter maintained roads) if the ground is frozen and there is an average of 6" of snow on the ground.

Big Game: The entire project area is designated as winter range for big game animals. Elk use the entire area, pronghorn use the area to the north, and moose and white-tail deer use the riparian corridor along the Michigan River. Operations may directly impact animals by temporarily displacing animals (especially large concentrations of elk) causing undue stress and havoc (e.g. fence damage from spooked herds). However, based on previous comments by the

Colorado Parks and Wildlife (CPW), they feel mild winters in North Park (2008-2009 and 2011-2012) would allow seismic activities to proceed with no negative impacts to wintering wildlife.

Soil, Water, Air: The proposed winter operational period would greatly reduce the amount of ground disturbance from cross country travel and vehicles used as the requirement of 6 inches of minimum snow cover and frozen ground would protect soil resources. In riparian areas along the Michigan River, willows would need to be avoided by vehicle traffic. The National Wetland Inventory is digitally available for the entire project area. The frozen ground and snow cover would aid in reducing impacts to water resources. It would be the proponent's responsibility to provide adequate buffers to existing water wells in area.

NAME OF PREPARER: Kelly Elliott

For more information, contact: Kelly Elliott, Reclamation & Minerals Management Specialist
at: (970) 724-3015 or khodgson@blm.gov

NAME OF ENVIRONMENTAL COORDINATOR: Susan Cassel

DATE: 2/14/12

ATTACHMENTS:

- 1). Project Map
- 2). Conditions of Approval
- 3). H-3150-1 – Onshore Oil and Gas Geophysical Exploration Surface Management Requirements (Public): BLM Standard Terms and Conditions

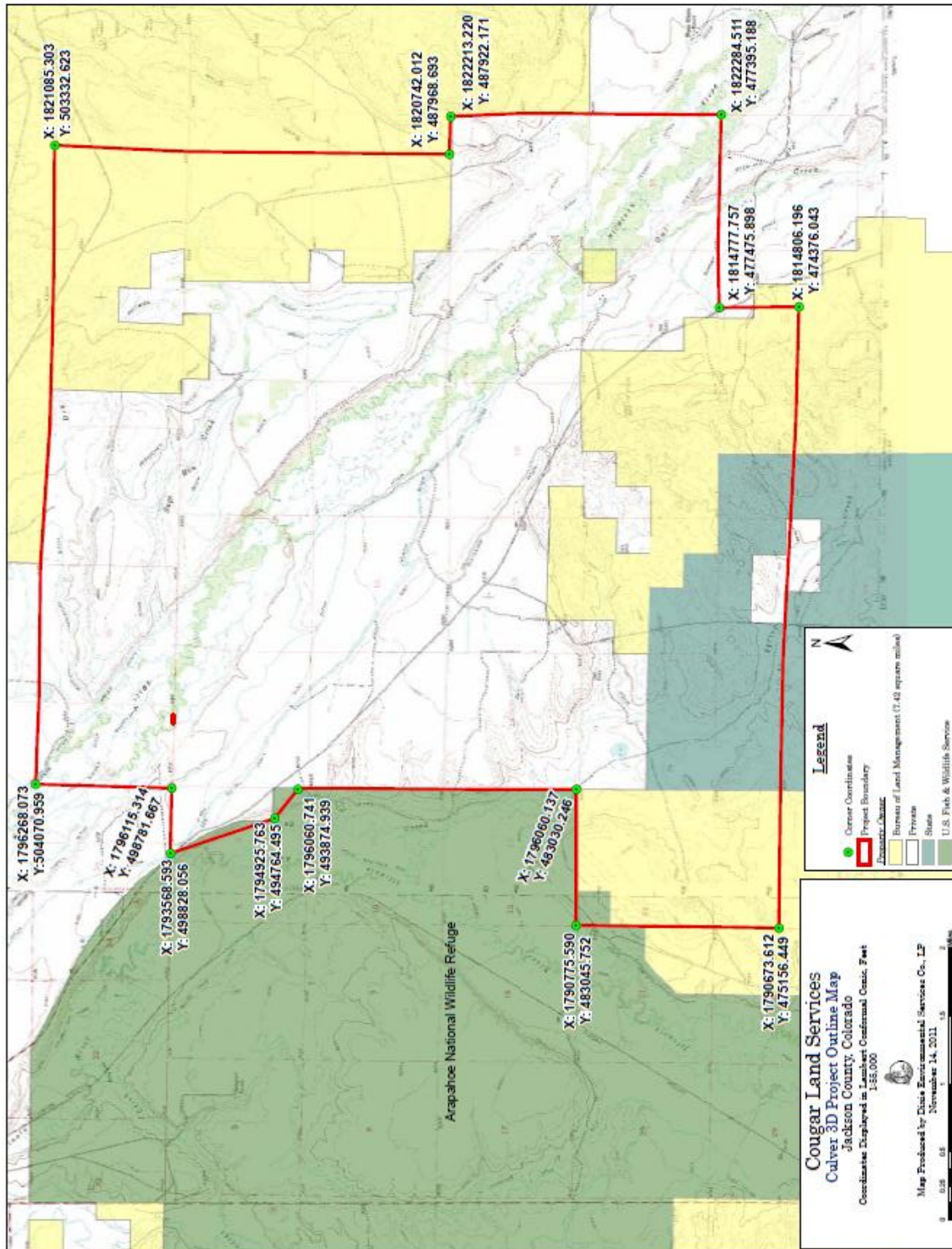
DECISION AND RATIONALE: I have reviewed this CER and have decided to implement the proposed action.

This action is listed in the Department Manual as an action that may be categorically excluded. I have evaluated the action relative to the 12 criteria listed above and have determined that it does not represent an extraordinary circumstance and is, therefore, categorically excluded from further environmental analysis.

SIGNATURE OF AUTHORIZED OFFICIAL: /s/ Susan Cassel

DATE SIGNED: 2/14/2012

Attachment 1



CONDITIONS OF APPROVAL

The standard terms and conditions included in BLM H-3150-1, Onshore Oil and Gas Geophysical Exploration Surface Management Requirements, would be incorporated as part of the Proposed Action and would be followed.

Cultural Resources:

1. The contract archaeologist will make one field check prior to initiation of seismic work to confirm that the ground is frozen and the adequate amount of snow is present. They will then check periodically as work progresses to assure that the ground requirements are maintained and the weather remains in the freezing temperature range. If there is not the minimum 6" of snow cover over frozen ground then, all receiver lines on BLM-administered and state land will be laid out by hand and picked up by hand (bundles of receiver lines and equipment may be transported and deposited to the field using a helicopter), and vehicular travel and vibroseis actions will be restricted to maintained and bladed county roads on BLM-administered land and state land.
2. Only Vibroseis actions would be allowed within areas of high site potential, avoiding known eligible or need data sites by the appropriate distance if structures are known or are not present.
3. The consulting archaeologist would identify all vibroseis points that have a potential to impact known cultural resources that are unevaluated (need data) or eligible for avoidance. Vibroseis points will be relocated 500 feet away from sites with standing historic structures or aboriginal stone features, and 200 feet from a site if there are no standing historic structures or aboriginal stone features. The cultural resource consultant will also monitor all avoided sites where standing structure or stone features are present during vibroseis.
4. In some areas (areas would be specified if required), those vibroseis locations that have been identified to be within known significant sites would need to be moved (i.e. to within an existing road, alternate location, or eliminated).

Sensitive Species: In order to protect sage-grouse during critical periods of their life requirements, no operations would be allowed on BLM from March 1st (or when breeding sites start to become occupied—usually as snow melts off) to June 30th.

In order to protect sage-grouse in critical winter range, motorized vehicles will only be permitted on winter maintained roads within T. 9N., R. 78W., Sec 4-6; T. 8N., R. 79W., Sec 13, 22-27; and T. 8N., R. 78W., Sec 18, 19, 20, 29 and 30. These roads include: CO Highway 14, JCR 12E, JCR 23A, JCR 31, JCR 21, and JCR 25. The proponent may request that motorized vehicles be allowed via cross county travel if all other conditions of the permit are met (e.g. the ground is frozen and there is an average of 6" of snow on the ground). BLM would consult with Colorado Parks & Wildlife (CPW) and additional Conditions of Approval (COA's) may apply.

Livestock Grazing: Any fences that may need to be cut must be repaired by proponent. Any gates used must be left as found (open or closed).

Vegetation: If native vegetation is removed during seismic operations, due to a ground disturbing activity (for example stuck vehicles, drilling and blasting impacts to vegetation or other unforeseen event) then the operator will be required to reseed the area with an approved BLM seed mix.

Soil, Water, Air: It will be the proponent's responsibility to provide the minimum 350 foot buffer to existing water wells in the project area.

Attachment 3

From H3150-1 (Rel. 3-289, 06/07/94)

Illustration 16 (as revised by Rel. 3-330, 01/09/07)

H-3150-1- ONSHORE OIL AND GAS GEOPHYSICAL EXPLORATION SURFACE MANAGEMENT REQUIREMENTS (PUBLIC)

Bureau of Land Management (BLM) Standard Terms and Conditions

1. The operator shall contact the Field/District Office at least 48 hours prior to the start of the project to schedule a pre-work conference. The crew supervisor and additional crew chiefs (if needed) will attend the pre-work conference to discuss the terms and conditions for this operation.
2. The operator's representative will attend a meeting with the BLM to discuss cultural artifacts and potential penalties for tampering with cultural artifacts. The meeting can be held as part of the pre-work conference.
3. The operator will obtain permission from right-of-way holders prior to drilling and setting charges within authorized limits of the rights-of-way.
4. Existing routes and trails will be used to the maximum extent possible. The heliportable drill or other BLM approved technique will be used on the areas with steep slopes and rough terrain. Attempts to traverse irregular, soft, or steep slopes and terrain by all vehicles and equipment shall be kept to a minimum to avoid excessive rutting, soil erosion, excessive crushing of vegetation, and excessive visual impacts. Vehicular travel along the flagged lines will be kept to a minimum and be in a zigzag pattern between source points to reduce straight line disturbances. This procedure does not apply to vehicles following trails or roads.
5. Vehicular travel shall be suspended when ground conditions are wet enough to cause rutting or other noticeable surface deformation and severe compaction. As a general rule, if vehicles or other project equipment create ruts in excess of four inches deep when traveling cross-country over wet soils, the soil shall be deemed too wet for vehicular use.
6. The staging area(s) will be situated with good, safe access to county roads or state highways. The fuel truck for the helicopter will also be utilized at the staging area(s).
7. The staging area(s) shall be kept clean and free of litter. Appropriate human waste facilities will be provided and properly maintained. Such waste facilities shall be removed from the site upon completion of the project.
8. Roads will not be constructed for geophysical projects authorized under a categorical exclusion.

9. Operators of vehicles and equipment shall be responsible for not damaging fences and keeping gates as found. As a last resort, should a fence be cut for access, that fence must be repaired to former or better condition, after equipment has passed through.
10. Shot holes will be backfilled and plugged, in accordance with state regulations, after they are loaded with the explosive charge. Any cuttings resulting from shot hole drilling and not used in backfilling the shot hole will be scattered about the immediate area to blend with natural terrain and reduce visual impacts.
11. Geophysical equipment may encounter congested areas with trees requiring one or more trees to be removed and or limbed. If such action is needed then the tree(s) and or limb(s) shall be less than eight (8) inches at diameter breast height (dbh) or at the base of the branch. Trees to be cut or limbed which are located adjacent to public roads, communities and or public facilities shall be immediately cut into smaller pieces so that it is not aesthetically displeasing and dispersed within the immediate vicinity.
12. Any and all tire tracks one hundred feet (100'), leading away from an established dirt or two track road situated on public lands, will be hand raked to blend into the surrounding soil surface.
13. If soil is disturbed to the extent that erosion is likely or visual impacts are readily apparent, the disturbed areas will be rehabilitated utilizing the following techniques:

Ruts and vehicle tracks will be filled with soil and/or obliterated by either hand raking or similar method. When completing this work, care will be taken to minimize disturbance to surrounding lands that have not been disturbed. All areas where rehabilitation work is accomplished will be reseeded with the seed mixtures specified below:

Seed Mix

(To be provided by the local BLM Field/District Office.)

The seeded area should be hand raked to assure the seed is covered with approximately $\frac{1}{4}$ to $\frac{1}{2}$ inch of soil. This seeding should be accomplished during the late fall, in October or November, before moisture conditions become prohibitive.

The seed shall be certified, pure live seed, and seed tags must be available if requested by the authorized officer. Certified weed free seed is to be used to rehabilitate disturbed land.

14. Setbacks and Buffers: the operator will adhere to setbacks or "buffer zones" that are set forth in the following tables.

**Offset in Feet, from Certain Objects
(based on pounds of explosive charge)**

| Object | < 1 lb | 1 lb | 2 lbs | 3 lbs | 5 lbs | 6 to 10 lbs | 11 to 15 lbs | 16 to 20 lbs |
|---|--------|------|-------|-------|-------|-------------|--------------|--------------|
| Pipeline less than 6" diameter | 50' | 100' | 150' | 150' | 200' | 250' | 300' | 400' |
| Pipeline 6" to 12" diameter | 75' | 150' | 200' | 200' | 300' | 400' | 500' | 600' |
| Pipeline greater than 12" diameter | 100' | 200' | 250' | 250' | 300' | 500' | 600' | 800' |
| Telephone line | 20' | 20' | 30' | 40' | 40' | 50' | 50' | 50' |
| Railroad Track or main paved Highway | 50' | 100' | 150' | 150' | 150' | 220' | 280' | 350' |
| Electric Powerline (Shot holes not to exceed 200' depth) | 75' | 100' | 200' | 200' | 200' | 200' | 250' | 300' |
| Water wells, buildings, underground cisterns, and all other similar objects | 225' | 300' | 400' | 450' | 700' | 800' | 1000' | 1200' |
| Brick and/or concrete block buildings | 275' | 400' | 500' | 600' | 800' | 1000' | 1200' | 1500' |
| Producing oil and gas well | 250' | 450' | 600' | 700' | 800' | 900' | 1000' | 1000' |
| Irrigation wells | 500' | 800' | 1000' | 1200' | 1500' | 2000' | 2500' | 2500' |

Minimum Safe Offset In Feet for Vibrator Truck Operations

| Structures | Distance (ft) |
|---|---------------|
| Residences, Buildings, Concrete Base Structures | 300 |
| Water Wells | 350 |
| Concrete Water Pipeline | 100 |
| PVC/Plastic Water Pipeline | 20 |
| Oil or Gas Well | 250 |
| Oil or Gas High Pressure Pipelines | 30 |
| High Voltage Power Lines | 0 |
| Local Transmission Power Lines | 0 |

15. No equipment, only foot traffic laying receiver lines, will be used in swampy/wetland areas.

16. If any unanticipated prehistoric or historic archaeological sites or paleontological sites are encountered during the geophysical work, the work shall stop and the appropriate BLM archaeologist at the Field/District Office will be contacted. If a site is found, it will be recorded. The BLM will assume responsibility for evaluation and determination of significance, related to the historical or archaeological site. All known cultural resources sites will be avoided. Collection of any cultural or paleontological artifacts, bones or fossils from Federal lands is specifically prohibited.
17. Visible migratory bird nests will be avoided and not disturbed.
18. All equipment will be power washed prior to entering Federal lands to help mitigate the spread of noxious plants.
19. In order to minimize watershed damage and disturbance to game animals utilizing important seasonal wildlife habitat, seismic activity will only be allowed during the period from May 15 to December 15. Exceptions to this limitation may be specifically approved by the authorized officer.
20. When fire conditions reach high, the helicopter, vehicles, and equipment will carry water, shovels, and other fire fighting equipment to extinguish any fires that are accidentally started by the seismic operations.
21. If oil, lubricants and other petroleum or man-made products are accidentally spilled onto the ground surface, the BLM will be contacted and provided specific information about the spill and/or leak. Spills or leaks will be cleaned from the soil and any contaminated material will be bioremediated or disposed of at an authorized landfill.
22. All flagging, lath, pin flags, and similar materials used in the seismic project will be removed from public land and disposed of at an authorized landfill.
23. All Applicant-Committed Environmental Protection Measures documented in the applicant's NOI will be complied with in addition to thes